

Adult specimens of the genera *Neobisium* and *Novobisium* can be distinguished by the following combinations of characters:

Cheliceral flagellum with seven to eleven setae, of which only the two distal ones are serrate, the others being smooth and acuminate; posterior genital operculum of male with a patch of small setae across the middle of the anterior edge; anterior genital operculum of female with a group, or row, of setae across the middle of the sternite. **Neobisium** Chamberlin.

Cheliceral flagellum with eight (rarely seven or nine) setae, of which the distal four (rarely five) are serrate, the others being smooth and acuminate; posterior genital operculum of male with a comb-like row of close-set, short, heavy setae in the center of the anterior edge; anterior genital operculum of female with two separate, small groups of setae, one group on either side of the midline. **Novobisium**, new genus.

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A New Species of *Empidideicus* Becker from Texas (Diptera: Bombyliidae)

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Melander (1946) gave a brief history of *Empidideicus* Becker and at that time described three new species, thereby establishing the genus in North America. Melander's species were re-

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corded from southern California and Arizona. The present species extends the range of distribution of *Empidideicus* to southwestern Texas.

These flies are among the smallest of the Bombyliidae, rarely, if ever, exceeding 2 mm in length and as such are undoubtedly frequently overlooked. They are remarkable in their reduction of the wing venation and in this respect they approach not only *Mythicomyia* but also *Cyrtosia*.

The following key has been adapted from Melander to include the new species.

KEY TO AMERICAN SPECIES OF EMPIDIDEICUS

1. Second vein vestigial, no distinctive marginal cell; basal cells of equal length, anterior basal veins pale; anal lobe wider than anal cell. 2
 Second vein distinct, curving to meet the first vein; second basal cell shorter than first basal cell; veins black; anal lobe no wider than anal cell; legs black; a conspicuous bright yellow spot above fore coxae. *propleuralis* Mel.
2. Scutellum nearly entirely yellow or white; abdomen predominantly pale. 3
 Scutellum black; abdomen black with the incisures narrowly yellow; humeri and notopleural suture yellow (♂), or humeri, broad notopleural mark and post-alar callosities yellow (♀). *humeralis* Mel.
3. Legs yellow, basal $\frac{2}{3}$ of femora black; last four abdominal segments yellow (Calif.) *scutellaris* Mel.
 Legs, except for tips of tarsi, entirely white; fourth abdominal segment with a median, basal, black spot; terminal segment entirely shining black (♂), side of abdomen with a broad black stripe from base to apex (♀). *timberlakei* n. sp.

Empidideicus timberlakei n. sp.

Quite similar to *scutellaris* but differs primarily in the distribution of black on the abdominal dorsum and the pale yellow to white legs. In *scutellaris* the color is yellow and the basal two-thirds of the femora are black.

Male: (1.2 mm). Black with white markings. Head shining black; front with lower half broadly white; width at median ocellus equal to length from antennal base to median ocellus; with a median longitudinal depression. Face from mouth opening to antennae, white, color continuous with that on front; rest of face black. Proboscis projecting a short way beyond epistoma, nearly as long as head height, more or less rigid with fleshy labellae. Palpi minute, not readily apparent. Antennae black, first segment extremely small, pale; apex of second segment pale; third segment swollen, nearly twice as long as basal segments combined, with short black hair at least on inner surface; arista distinctly separated and nearly as long as third segment, tapering from base to acuminate tip, minutely setulose. Occiput shining black, swollen, with short, thin, scattered pale yellow hair.

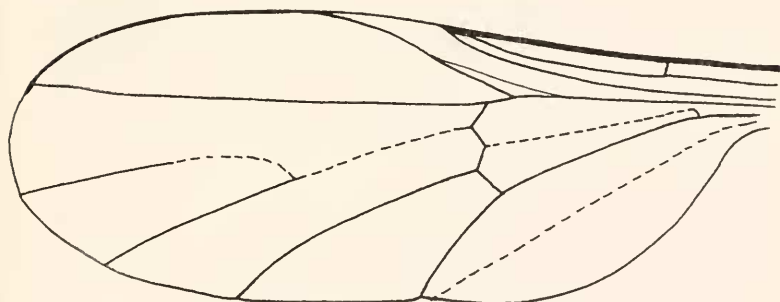


FIG. 1. *Empidideicus timberlakei*, n. sp. Holotype male.

Mesonotum, to scutellum, shining black, lateral margin white from humeral callus to post-alar callus, with short, scattered pale yellow hair. Pleura black, subshining, a broad white stripe runs from propleuron to wing base, color contiguous with that on side of mesonotum; a light spot above fore coxae, sutures faintly and narrowly pale. Coxae dull black, apices white. Legs except for dark tarsi, white. Halter entirely white. Squama white, without an apparent fringe. Scutellum white, narrowly black at base. Wing hyaline, veins at anterior basal third of the wing pale, rest brown; second vein forms an ob-

scure, small marginal cell (Fig. 1); base of fourth vein from *r-m* crossvein to fork only obscurely present, as is axillary vein and the vein separating the two coextensive basal cells; anal lobe nearly twice as wide as anal cell; discal cell confluent with second posterior cell; costa extends to apex of third vein, not reaching apex of wing.

Abdomen white, middle of first four segments broadly black, color decreasing in amount posteriorly, black color does not reach lateral margin; dorsal plate of genitalia shining black, dorsum with short, pale pile; venter entirely white. Genitalia with dorsal plate large, emarginate on side, nearly completely covering the open pygidium.

Female: Like the male except the light color tends more toward yellow than white. Side of abdomen with a broad, median black stripe extending from base to apex; first sternite black. Genitalia entirely yellow.

The variations in the eight specimens before me are slight indeed; the pale spot above the fore coxae may or may not be present as is a similar spot above the hind coxae. The first and second veins may be completely coalesced rather than as described, or obscured by the color of the first vein and the associated membrane.

E. timberlakei is placed somewhere between *scutellaris* and *propleuralis*. The eyes in both sexes are widely separated as in *scutellaris* and the basal cells are equal in length. The second vein forms a small marginal cell as in *propleuralis*.

Holotype male, allotype female and five paratypes from 26.2 mi. E. Sierra Blanca, Hudspeth Co., TEXAS, 4 September 1965 (P. H. Timberlake) on flowers of *Tidestromia* sp. All in the collection of the University of California at Riverside.

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